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## The Bees of Southern California.— VI.

T. D. A. Cockerell

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## The Bees of Southern California. VI.\*

BY T. D. A. COCKERELL.

### *TRACHUSA*, *Jurine*.

#### *Trachusa perdita*, n. sp.

Male; length about 12 mm.; black; head and thorax rugose, the punctures excessively close, the dorsum of the thorax entirely dull, its pubescence and that of occiput light greyish with a faint yellowish tint; that of face, cheeks, pleura and sides of meta-thorax white; clypeus and lateral face-marks cream-color; the lateral marks triangular, filling the interval between the clypeus and the eyes, and ending a little above the level of the upper margin of the clypeus, the angle formed by the upper margin of the lateral face-marks and the eye a right angle; clypeus shining, the punctures strong, but well separated, a strong median longitudinal ridge; middle anterior margin of clypeus with six little brown nodules; mandibles black; facial quadrangle much longer than broad; antennae entirely black, third joint longer than fourth; thorax black without markings; tegulae very dark brown, strongly punctured; wings stained with reddish brown, especially in the marginal cell; second recurrent nervure passing beyond tip of second submarginal cell; basal nervure meeting transverso-medial; legs entirely black, except that the tibial spurs are reddish-orange, and the claws are ferruginous at base; pulvilli large; abdomen black without light markings, the hind margins of the segments with thin bands of white hair; punctures stronger and closer on the second and fifth segments than on the third and fourth; sixth segment with a subapical nodulose transverse keel from which proceeds a little keel in the middle line to the hind margin, which is ferruginous and curved outwards; seventh segment black, broadly and deeply emarginate; genitalia dark ferruginous.

Tehachapi, California; one collected by Dr. Davidson. The genus *Trachusa* has hitherto been known from Europe, and its discovery in America is of great interest. The present species departs from typical *Trachusa*, and leans towards *Dianthidium*, in the venation; evidently the two genera are closely allied. In general, it is remarkable how greatly our insect resembles *T. serratulae*, which I have from Innsbruck (Fiese).

\*Continued from p. 90 (this volume) No. 6, June, 1904.

**Erratum.** In part V, p. 88, the characters given under 4 in the table refer to *A. cardui*, ckl. A couple of lines were omitted in printing.

*BOMBOMELECTA*, Patton.***Bombomelecta edwardsii* (Cresson).**

Los Angeles, one male (Davidson). Previously known from Ocean View. When sunlight is allowed to fall on the abdomen from in front, the surface presents a strong purple lustre.

*CENIRIS*, Fabricius.***Centris hoffmanseggiae*, subsp. nov. *davidsoni*.**

Male; length about 15 mm.; black; face very narrow, the eyes large and prominent, pale ochreous when dry; ocelli large, distance between the lateral ocelli and the eyes less than the diameter of an ocellus; clypeus, a narrow supraclypeal stripe, and labrum cream-color; clypeus shining and sparsely punctured; mandibles with a cream-colored stripe on the upper margin; pubescence of occiput, mesothorax and scutellum pale ochreous; of cheeks, pleura and metathorax white and strongly plumose; scutellum prominent, shining, with strong punctures well separated; tegulae testaceous; wings rather milky, nervures brown; legs black, the spurs and small joints of tarsi ferruginous; hair of legs white, slightly ochraceous on tibiae in front, very dark brown on inner side of basal joint of hind tarsi; abdomen rather densely covered with erect greyish-white hair; apex produced and rounded; ventral segments with the hind margins whitish. Mandibles tridentate. The type of *hoffmanseggiae*, when the abdomen is viewed laterally, shows short dark fuscous hair on the fourth and fifth segments; *davidsoni* shows larger and entirely light hair on these segments, and is a larger insect.

Banning, Cal., one (Dr. Davidson).

Dr. Davidson's collections are bringing out the fact that in the bees, as in several other groups, species are represented in many instances by an inland form, of the arid parts of Nevada, Arizona, New Mexico, etc., and a closely allied but distinct California form. In the absence of collections from many intermediate localities, it is impossible to say in each case whether these really intergrade; but when they are very closely allied, I treat them as geographical races of a single species for the present. Such a course, while subject to revision, at all events serves to indicate the obvious relationships.

***Centris cockerelli*, Fox.**

I give a new description, as the existing one is rather too short.

Female; length about 12 mm.; black, shining; clypeus (except lateral and superior margins) and labrum reddish in the California specimens, but evidently changed from orange by cyanide; eyes, when dry, gray; vertex about ocelli very shiny,

hardly punctured, a tuft of fulvous hair just behind ocelli; hair of occiput whitish, of cheeks white; antennae black; facial quadrangle longer than broad; hair of thorax very dense, tinged with ochreous, and even with fulvous above; tegulae pale testaceous; wings slightly dusky; legs black, with mainly black pubescence, but that on anterior femora behind yellowish-white; the abundant and coarse scopa of hind tibiae and tarsi wholly black; abdomen black, practically nude, only the first segment with pale pruinose pubescence. The pectoral hair of thorax is variably sooty in this species, so *C. foxi*, Friese, must be separated on the characters of the clypeus and labrum, not those of the pubescence.

Palm Spring, Cal., two collected by Dr. Davidson. Previously known from New Mexico.

*EMPHOROPSIS*, Ashmead.

*Emphoropsis infernalis*, (Dalla Torre) subsp. nov. *tristissima*.

Female; length about 14 mm.; black, robust, with the pubescence entirely black, except a little reddish on hind part of mesothorax, and dark reddish on inner side of basal joints of tarsi; facial quadrangle broader than long; inner orbital margins straight; clypeus coarsely rugoso-punctate; labrum covered with black hair; pubescence of thorax and first segment of abdomen dense, rest of abdomen rather shining and not conspicuously pubescent; tegulae very dark brown; wings only a little dusky; knee-plates of hind tibiae whitish with a large reddish patch, very conspicuous; legs normal, hind tibiae and tarsi more or less ferruginous. Lacks the light pubescence seen in typical *infernalis*, which is from Nevada.

Los Angeles, one, and Lancaster, Mohave Desert, one, both collected by Dr. Davidson.

*E. infernalis* was described as an *Anthophora*, but Dr. Ashmead wrote me, some years ago, that it was an *Emphoropsis*.

*ANTHOPHORA*, Latreille.

*Anthophora crotchii*, Cresson.

Dr. Davidson obtained one at Banning; I give a new description, that of Cresson being rather short.

Male; length about 16 mm.; black; head and thorax with abundant yellowish pubescence; that of abdomen more scanty, whitish basally, but erect and black on the third to sixth segments, the sixth fringed with whitish, and a light tuft on each side of the apex; eyes large, reddish when dry; facial quadrangle considerably longer than broad, narrowest in the middle; ocelli large, a prominent tuft of long ochreous hair just

behind the anterior ocellus; scape flattened, shining and entirely orange in front, black behind; rest of antenna black; clypeus very prominent and convex, it, the labrum, the lateral face-marks, a supraclypeal band, and the greater part of the mandibles, orange; a tuft of hair on the lower corner of clypeus on each side of labrum; lateral face-marks occupying the space between the clypeus and the eye, and sending a narrow stripe along the inner orbits to a little beyond the level of the antennae; tegulae piceous; wings nearly clear, marginal cell appendiculate; legs black, the tarsi becoming ferruginous; middle femora conspicuously fringed with ochreous hair behind; middle tarsi with long white hairs, the basal joint with short orange hairs within, the last joint with a broad black fan of hairs like a peacock's feather; hind trochanters with a low conical tubercle; spurs of hind tibiae far apart at base; hind tarsi normal except that the basal joint is broadened and flattened; hind margins of the abdominal segments narrowly pallid.

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